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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,701	02/13/2002	Wen Tong	7000-129	7059
27820	7590	05/13/2005	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			BAKER, STEPHEN M	
P.O. BOX 1287			ART UNIT	
CARY, NC 27512			PAPER NUMBER	
			2133	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/074,701

Applicant(s)

TONG

Examiner

Stephen M. Baker

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 12-15, 18, 20-25, 30, 32-35, 38 and 40 is/are rejected.
- 7) ☒ Claim(s) 6-9, 11, 16, 17, 26-29, 31, 36, 37, 39 and 41-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-5, 10, 12-15, 18, 20-25, 30, 32-35, 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,646,518 to Weinstein (hereafter "Weinstein") in view of U.S. Patent No. 4,059,825 to Greene (hereafter "Greene").

Weinstein discloses a communication system for transmitting error correction coded digital data between computers, including retransmission for error control. For each new error correction code word sent from a data transmitting terminal (Fig. 1A) and received by a data receiving terminal (Fig. 1B) in Weinstein's system, a coded acknowledgement feedback message is generated by the data receiving terminal and returned to the data transmitting terminal. For each received new code word that is "not properly received" (*i.e.* uncorrectable), Weinstein's coded acknowledgement feedback message is generated with an inverting step (col. 4, line 37) and serves as a "negative-acknowledgement (NAK) from the receiver". For each received new code word that is "properly received" (*i.e.* correctable or errorless), Weinstein's coded acknowledgement feedback message is generated without an inverting step (col. 4, line 63) and serves as an "acknowledgement (ACK) from the receiver" (col. 8, lines 39-45). When a data word is to be retransmitted using Weinstein's system, a number of new code words, spaced I

words apart, are modified by puncturing out the error correction code parity bits and replacing them with bits of the data word to be retransmitted, thereby forming retransmission words (col. 3, lines 9-25). If the error correction coding rate is  $1/3$ , for example, then it is necessary to puncture the error correction parity from three code words packets in order to retransmit the data of a negatively-acknowledged code word. Weinstein thereby provides steps of dividing the data word into a plurality of sub-words for retransmission and puncturing code words in the sequence of code words with the sub-words, so that Weinstein's data receiving terminal can recover the sub-words from punctured code words in order to recreate the data word that required retransmission.

Weinstein does not describe sending the code words in "packets". Greene discloses that it is conventional to periodically add a packet synchronization code to a stream of code words in order to provide the advantage of framing to assist decoder synchronization (col. 2, lines 55-63). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Weinstein's communication system by incorporating logic for generating and detecting the conventional packet synchronization code mentioned by Greene. Such a modification would have been obvious because the conventional packet synchronization code mentioned by Greene provides the advantage of decoder synchronization assistance.

Regarding claims 3 and 23, as Weinstein's retransmission words are spaced apart by  $l$  code words and still include the same amount of newly-transmitted original data, it is apparent that the sequence of code words is continuously transmitted without regard to receiving the ACK".

Regarding claims 5, 15, 25 and 35, Weinstein's punctured parity bits are "non-systematic bits" that are "select" to the extent that the code word spacing rule selects code words to be parity-punctured.

Regarding claims 10, 18, 30 and 38, successive words of retransmitted data in Weinstein's system can be considered to provide "incremental redundancy".

Further regarding claims 12 and 32, though not shown by Weinstein, the transmitted data in Weinstein's system presumably requires some form of data word decoding, after error correction, in order to be further processed.

3. Claims 8 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinstein in view of Greene, and further in view of U.S. Patent No. 4,725,834 to Chang *et al* (hereafter "Chang").

Weinstein does not mention sending data from one transmitting station to more than one receiving station. Chang discloses computer communication by means of a network providing the well-known advantage of allowing communication of packet data to multiple computers on the network. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply Weinstein's coding and code puncturing arrangements to communication on the network disclosed by Chang. Such an application would have been obvious because the usefulness of providing a network allowing communication with multiple computers was already well known, as shown by Chang.

***Allowable Subject Matter***

4. Claims 6, 7, 9, 11, 16, 17, 19, 26, 27, 29, 31, 36, 37, 39 and 41-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-5, 10, 12-15, 18, 20-25, 30, 32-35, 38 and 40 have been considered but are moot in view of the new ground of rejection.

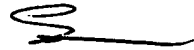
***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (571) 272-3814. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen M. Baker  
Primary Examiner  
Art Unit 2133

smb